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Intellectual Property Law Group

Verizon Corporate Services Group Inc

To: U.S. Patent and Trademark Office –
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Examiner: C.G. COLIN
Group Art Unit: 2136

From: Christian R. Andersen
Specialist – Intellectual Property

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FORMAL SUBMISSION OF:

1) **Appeal Brief.**

Title:	METHOD AND APPARATUS FOR THE GENERATION AND DISTRIBUTION OF RANDOM BITS
Serial No.	09/634,416
Filing Date:	August 8, 2000
First Named Inventor:	Brig Barnum ELLIOTT
Atty. No.	99-466
Customer Number:	32127

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Docket No.: 99-466
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Brig Barnum Elliott

Confirmation No.: 4607

Application No.: 09/634,416

Art Unit: 2136

Filed: August 8, 2000

Examiner: C.G. Colin

For: METHOD AND APPARATUS FOR THE GENERATION AND DISTRIBUTION OF RANDOM BITS

APPEAL BRIEF

Mail Stop Appeal Brief- Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This appeal is from the decision of the Primary Examiner dated December 12, 2005 ("Final Office Action"), finally rejecting claims 1-22, which are reproduced as an Appendix to this brief. The Notice of Appeal was filed on March 10, 2006. This application was filed on August 8, 2000.

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Application No.: 09/634,416 Docket No.: 99-466

I. REAL PARTY IN INTEREST

The real parties in interest are Verizon Services Corp., Assignee, a corporation organized and existing under the laws of the state of Delaware, and having a place of business at 1095 Avenue of the Americas, New York, NY 10036; and BBNT Solutions LLC, a company organized and existing under the laws of the state of Delaware, and having a place of business at 10 Moulton Street, Cambridge, Massachusetts 02138.

II. RELATED APPEALS AND INTERFERENCES

Applicant (hereinafter "Appellant") is not aware of any related appeals or interferences that would affect the Board's decision on the current appeal.

III. STATUS OF CLAIMS

Claims 1-22 are pending. No claims are canceled or withdrawn from consideration, and no claims have been allowed. All of pending claims 1-22 stand rejected and are the subject of this appeal.

Claims 1, 8, 12-14, and 20 are independent claims. In the Final Office Action, claims 1-19 were rejected as allegedly indefinite under 35 U.S.C. § 112, second paragraph. Further, claims 1-19 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. 6,236,981 ("Hill") in view of U.S. 6,792,438 ("Wells"). Claims 20-22 were rejected under Section 103(a) as allegedly unpatentable over Hill in view of U.S. 5,677,953 ("Dolphin").

IV. STATUS OF AMENDMENTS

In their Amendment pursuant to 37 C.F.R. § 1.116 filed February 10, 2006, Applicants (hereinafter, "Appellants") requested that certain amendments to claims 1, 8, 12, 13, 14, and 20 be entered to place the application in better condition for appeal. However, in the Advisory Action mailed March 2, 2006, the Examiner declined to enter the foregoing amendments. Accordingly, no Amendment After Final Rejection has been entered into the prosecution record of the present application.

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V. SUMMARY OF CLAIMED SUBJECT MATTER

The presently claimed invention includes the generation and distribution of truly random bits over a network. The following is a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, as required by 37 C.F.R. § 41.37(c)(1)(v). In general, the following explanation is not intended to be used to construe the claims, which are believed to speak for themselves, nor do Appellants intend the following explanation to modify or add any claim elements, or to constitute a disclaimer of any equivalents to which the claims would otherwise be entitled. References herein to the Specification are intended to be exemplary and not limiting.

A. Claim 1

Claim 1 recites a system having a random source adaptable for distributing a random bit stream over a network. The system comprises an input interface coupled to the random source for receiving a random data stream from the random source and outputting the random bit stream. For example, the random source can have analog-to-digital conversion associated therewith, such that a serial digital bit stream is sent to the input interface. Alternatively, the system itself can perform the analog-to-digital conversion, in which case an analog random source output is inputted to the input interface of the disclosed system. The input interface accepts the random data stream from the random source by way of an input connection. The input interface converts the random source data to a random bit stream. (Specification, page 3, lines 17-24.)

The system of claim 1 further comprises a processor for receiving the random bit stream from the input interface and outputting the random bit stream in a machine readable form. For example, with reference to Figure 1 in Appellant's application, processor 106 converts the random bit stream into a machine-readable random bit stream. A machine-readable bit stream is one that has been formatted such that it is readily useable by a remote user terminal 114. The formatting performed by processor 106 may entail assembling the random bits into uniform word lengths, providing error detection and correction, adjusting the amplitude of the random bit stream, etc. (Specification, page 8, lines 20-28.) In one embodiment, processor 106 wakes up to perform a read of random bits from input interface 104. A harvester task is executed in processor 106 to perform the read operation. When the harvester task is executed, it reads a batch of random bits from input

interface 104. The size of the batch is selectable using system configuration parameters defined by a system operator. (Specification, page 8, line 30 – page 9, line 4.)

The system of claim 1 further comprises a plurality of disk files for saving random bits output from the processor. For example, the harvester task may append the present batch of random bits to a disk file. Disk files are chosen to be a given size based on system parameters such as system memory and user demand. An open disk file contains the present stream of random bits. The harvester task reads additional random bits into the open disk file until the predefined size of the disk file is reached. When the disk file limit is reached, the harvester task closes the present disk file and opens a new one. (Specification, page 9, lines 4-9.)

The system of claim 1 further comprises a memory coupled to the processor for storing machine readable instructions used by the processor for formatting the random bit stream into a machine readable form . For example, again with reference to Figure 1, a memory 110 is connected to processor 106 by bus 120. Memory 110 provides processor 106 with the instructions necessary to properly format the random bit stream into a machine-readable random bit stream as previously described. Memory 110 is normally external to processor 106, although it can reside on processor 106 if desired. (Specification, page 10, lines 20-23.)

The system of claim 1 further comprises a network connection coupled to the processor for making the random bit stream available to a network. For example, again with reference to Figure 1, network connection 108 is normally embodied as a network interface card such as an Ethernet card, Fiber optic Distributed Data Interface (FDDI) card, wireless LAN card, modem card, or Asynchronous Transfer Mode (ATM) card; however, other types of network connections can be employed. Additionally, network connection 108 can be a stand-alone component, or alternatively, network connection 108 can be integrated with other components such as processor 106 or input interface 104. When formatting data for network transport, network connection 108 encapsulates the random bit stream with necessary header information, error detection information, encryption deciphering information, compression/decompression information, and network protocol information. (Specification, page 11, lines 1-13.)

The system of claim 1 further comprises a download task executed by the processor for providing to a user any desired number of random bits requested by the user. For example, again

with reference to Figure 1, if a web server is used, a remote user 114 communicates with the web server using a web client when random bits are desired. The user's request identifies the number of bits required and any special formatting requirements. To fulfill the user request, the download task reads the desired number of bits from the available disk files containing random bits. (Specification, page 10, lines 8-12.)

B. Claim 8

Claim 8 recites method for generating random bits as a function of a random source and distributing the random bits over a network. The method comprises collecting random data from a random source. For example, the random source can have analog-to-digital conversion associated therewith, such that a serial digital bit stream is sent to an input interface. Alternatively, the system itself can perform the analog-to-digital conversion, in which case an analog random source output is inputted to the input interface of the disclosed system. The input interface accepts the random data stream from the random source by way of an input connection. The input interface converts the random source data to a random bit stream. (Specification, page 3, lines 17-24.)

Further, the method of claim 8 comprises processing the random data to produce a random bit stream in a machine readable form. For example, with reference to Figure 1 in Appellant's application, processor 106 converts the random bit stream into a machine-readable random bit stream. A machine-readable bit stream is one that has been formatted such that it is readily useable by a remote user terminal 114. The formatting performed by processor 106 may entail assembling the random bits into uniform word lengths, providing error detection and correction, adjusting the amplitude of the random bit stream, etc. (Specification, page 8, lines 20-28.) In one embodiment, processor 106 wakes up to perform a read of random bits from input interface 104. A harvester task is executed in processor 106 to perform the read operation. When the harvester task is executed, it reads a batch of random bits from input interface 104. The size of the batch is selectable using system configuration parameters defined by a system operator. (Specification, page 8, line 30 – page 9, line 4.)

Further, the method of claim 8 comprises saving the random bits in a plurality of disk files. For example, the harvester task may append the present batch of random bits to a disk file. Disk files are chosen to be a given size based on system parameters such as system memory and user

demand. An open disk file contains the present stream of random bits. The harvester task reads additional random bits into the open disk file until the predefined size of the disk file is reached. When the disk file limit is reached, the harvester task closes the present disk file and opens a new one. (Specification, page 9, lines 4-9.)

Further, the method of claim 8 comprises providing the random bits to a network connection. For example, again with reference to Figure 1, network connection 108 is normally embodied as a network interface card such as an Ethernet card, Fiber optic Distributed Data Interface (FDDI) card, wireless LAN card, modem card, or Asynchronous Transfer Mode (ATM) card; however, other types of network connections can be employed. Additionally, network connection 108 can be a stand-alone component, or alternatively, network connection 108 can be integrated with other components such as processor 106 or input interface 104. When formatting data for network transport, network connection 108 encapsulates the random bit stream with necessary header information, error detection information, encryption deciphering information, compression/decompression information, and network protocol information. (Specification, page 11, lines 1-13.)

Further, the method of claim 8 comprises transmitting any desired number of the random bits requested by a user over the network. For example, again with reference to Figure 1, if a web server is used, a remote user 114 communicates with the web server using a web client when random bits are desired. The user's request identifies the number of bits required and any special formatting requirements. To fulfill the user request, the download task reads the desired number of bits from the available disk files containing random bits. (Specification, page 10, lines 8-12.)

C. Claim 12

Claim 12 recites a distributed system for the production and distribution of random bits. The system of claim 12 comprises a first random number source generating a first random data stream and a second random number source generating a second random data stream. For example, Figure 4 shows two random number sources 402. (Specification, page 14, lines 25-27.)

The system of claim 12 further comprises an interface to the first random number source for receiving the first random data stream and the second random data stream, the interface outputting a random bit stream. Again with reference to Figure 4, two systems 400 are configured similarly the

system illustrated in Figure 1. (Specification, page 14, line 25.) For example, the random source can have analog-to-digital conversion associated therewith, such that a serial digital bit stream is sent to the input interface. Alternatively, the system itself can perform the analog-to-digital conversion, in which case an analog random source output is inputted to the input interface of the disclosed system. The input interface accepts the random data stream from the random source by way of an input connection. The input interface converts the random source data to a random bit stream. (Specification, page 3, lines 17-24.)

The system of claim 12 further comprises a processor for receiving the random bit stream from the interface, and for formatting the random bit stream for distribution in a machine readable form. For example, with reference to Figure 1, processor 106 converts the random bit stream into a machine-readable random bit stream. A machine-readable bit stream is one that has been formatted such that it is readily useable by a remote user terminal 114. The formatting performed by processor 106 may entail assembling the random bits into uniform word lengths, providing error detection and correction, adjusting the amplitude of the random bit stream, etc. (Specification, page 8, lines 20-28.) In one embodiment, processor 106 wakes up to perform a read of random bits from input interface 104. A harvester task is executed in processor 106 to perform the read operation. When the harvester task is executed, it reads a batch of random bits from input interface 104. The size of the batch is selectable using system configuration parameters defined by a system operator. (Specification, page 8, line 30 – page 9, line 4.)

The system of claim 12 further comprises a network connection coupled to the processor for making the machine readable random bit stream available to a network. For example, again with reference to Figure 1, network connection 108 is normally embodied as a network interface card such as an Ethernet card, Fiber optic Distributed Data Interface (FDDI) card, wireless LAN card, modem card, or Asynchronous Transfer Mode (ATM) card; however, other types of network connections can be employed. Additionally, network connection 108 can be a stand-alone component, or alternatively, network connection 108 can be integrated with other components such as processor 106 or input interface 104. When formatting data for network transport, network connection 108 encapsulates the random bit stream with necessary header information, error

detection information, encryption deciphering information, compression/decompression information, and network protocol information. (Specification, page 11, lines 1-13.)

The system of claim 12 further comprises a memory coupled to the processor for storing machine readable instructions used by the processor to format the random bit stream for distribution to the network connection in response to a user request for any desired number of the random bits. For example, again with reference to Figure 1, a memory 110 is connected to processor 106 by bus 120. Memory 110 provides processor 106 with the instructions necessary to properly format the random bit stream into a machine-readable random bit stream as previously described. Memory 110 is normally external to processor 106, although it can reside on processor 106 if desired. (Specification, page 10, lines 20-23.) Further, additional software instructions are included for properly formatting and synchronizing random bit streams arriving from a plurality of random bit sources into a single random bit stream for distribution across network 412. (Specification, page 15, lines 7-10.)

D. Claim 13

Claim 13 recites a computer readable medium containing instructions for controlling at least one machine to perform a method for distributing random bits to a remote user. The method comprises converting a random data stream into a machine readable random bit stream. For example, a random source can have analog-to-digital conversion associated therewith, such that a serial digital bit stream is sent to an input interface. Alternatively, the system itself can perform the analog-to-digital conversion, in which case an analog random source output is inputted to the input interface of the disclosed system. The input interface accepts the random data stream from the random source by way of an input connection. The input interface converts the random source data to a random bit stream. (Specification, page 3, lines 17-24.)

The method of claim 13 further comprises saving the random bits to a plurality of disk files. For example, a harvester task may append the present batch of random bits to a disk file. Disk files are chosen to be a given size based on system paramcters such as system memory and user demand. An open disk file contains the present stream of random bits. The harvester task reads additional random bits into the open disk file until the predefined size of the disk file is reached. When the disk

file limit is reached, the harvester task closes the present disk file and opens a new one. (Specification, page 9, lines 4-9.)

The method of claim 13 further comprises providing the machine readable random bit stream to a network connection and transmitting any desired number of random bits requested by a user in the machine readable random bit stream over a network. For example, again with reference to Figure 1, network connection 108 is normally embodied as a network interface card such as an Ethernet card, Fiber optic Distributed Data Interface (FDDI) card, wireless LAN card, modem card, or Asynchronous Transfer Mode (ATM) card; however, other types of network connections can be employed. Additionally, network connection 108 can be a stand-alone component, or alternatively, network connection 108 can be integrated with other components such as processor 106 or input interface 104. When formatting data for network transport, network connection 108 encapsulates the random bit stream with necessary header information, error detection information, encryption deciphering information, compression/decompression information, and network protocol information. (Specification, page 11, lines 1-13.)

E. Claim 14

Claim 14 recites a method for producing a random bit stream from a random source and offering the random bit stream to a remote user. The method comprises processing the random bit stream to form a distributable random bit stream. With reference to Appellant's Figures 1 and 5, a random source 102 generates a random bit stream (step 502). The random bit stream is accepted by the input interface (step 504). Next, input interface 104 makes the random bit stream available to processor 106. Processor 106 formats the random bit stream into a machine-readable format acceptable for encapsulation into a transmittable format by network connection 108 (step 506). Normally, statistical analyses are performed on the random bit streams in step 506. (Specification, page 15, line 24-29.)

The method of claim 14 further comprises making the distributable random bit stream available to a remote user from at least one of a plurality disk files. Still with reference to Appellant's Figures 1 and 5, the machine-readable random bit stream, available at the output of processor 106, is then archived to storage device 326 as disk files (step 508). (Specification, page 15, line 29 – page 16, line 2.)

The method of claim 14 further comprises transmitting to the user over a network any desired number of random bits requested by the user. Still with reference to Appellant's Figures 1 and 5, A remote user 114 initiates a request for a number of random bits (step 510). System 100 then determines if remote user 114 has a valid user account (step 512). When remote user 114 has a valid account, then the user's request is processed (step 514). If the user does not have an account, the session is terminated (step 516). In some instances system 100 will be set up so that remote user 114 has a prepaid account balance. If a prepaid account balance is used, then the cost of the random bit stream is deducted from the remote user's account. In other cases, the payment for random bits can be accomplished using a credit card, account transfer, or other electronic payment means. As part of processing the request, the necessary number of random bits is retrieved from storage (step 518). The retrieved bit stream is then sent to network connection 108 (step 522); in addition, the retrieved bit stream is indexed and stored with reference to the remote user's account information (step 520). The retrieved bit stream is stored before being sent over network 112 in case the information must be resent due to a network error or equipment failure. After storing the retrieved data, the random bit stream is made available to network 112 (step 524). Network 112 carries the random bit stream to remote user 114 using a selected network protocol (step 526). The requested bit stream is delivered to the remote user's computer 114 via network 112 (step 528). (Specification, page 16, lines 3-19.)

F. Claim 20

Claim 20 recites a system for making random numbers available to a remote user in digital form. The system comprises a computer. An exemplary computer is illustrated in Appellants Figure 3, and includes a processor 306, a main memory 3 10, a read only memory (ROW 324, a storage device 326, a bus 309, a display 328, a keyboard 330, a cursor control 316, a communication interface 308, and an input interface 304. (Specification, page 13, lines 12-15.)

The system of claim 20 further comprises a display device communicatively coupled to the computer. Again with reference to Figure 3, display device 328 may be a cathode ray tube (CRT), or the like, for displaying information to a system operator. (Specification, page 13, lines 29-30.)

Further, the display device comprises a first window for displaying information about a random bit stream awaiting distribution over a network. For example, with reference to Appellant's

Figure 6, disk file status sub window 612 contains information about available disk files containing random bits. The disk file status sub window 612 provides the operator with information regarding the quantity of tested random bits available to users. As a particular disk file is consumed by users, the size of the file decreases. When a disk file is empty it is discarded and the next available disk file is opened. (Specification, page 17, lines 14-19.)

Further, the display device comprises a second window for displaying diagnostic information regarding the random bit stream. For example, again with reference to Figure 6, diagnostic sub window provides the operator with information regarding disk files containing errors. When system 100 detects a problem with a disk file, the diagnostic sub window 602 is automatically opened. Coincidentally with the opening of the diagnostic sub window 602, an audible alarm sounds to notify the operator of a problem. Using an input device, such as a mouse, to click on the alarm button 608 silences the audible alarm. Diagnostic monitor 602 provides the operator with detailed information about a problem disk file. Clicking on any of the entries in diagnostic sub window 602 opens an additional sub window providing additional detail on the entry. A forward button 606 is provided to allow the operator to quickly forward problem information to previously designated personnel. The list of designated personnel is provided using a listing of email addresses organized such that clicking on the forward button 606 sends the message to all identified recipients. (Specification, page 17, line 20 – page 18, line 2.)

The display further comprises a window manager, running in software, used to control the communication of information to the display device. For example, the window manager controls the layout and the content of the sub windows displayed for the operator. Additionally, the window manager formats data and other information received from processor 106 or memory 110. If desired, the window manager can be configured to perform additional functions such as screen captures for printing or for controlling multiple displays simultaneously. The use of multiple displays provides an operator with the ability to distribute sub windows among displays to make organization and viewing easier. (Specification, page 18, lines 13-20.)

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. That claims 1-19 are indefinite under 35 U.S.C. § 112, second paragraph.

2. That claims 1-19 are unpatentable under 35 U.S.C. § 103(a) over the combination of Hill and Wells.

3. That claims 20-22 are unpatentable under 35 U.S.C. § 103(a) over the combination of Hill and Dolphin.

VII. ARGUMENT

A. Claims 1-19 Are Patentable Under 35 U.S.C. § 112, Second Paragraph (Ground of Rejection No. 1).

Claim 1 recites "a download task executed by the processor for providing to a user any desired number of random bits requested by the user." Claim 8 recites "transmitting any desired number of random bits requested by a user over the network." Claim 12 recites "machine readable instructions . . . to format the random bit stream for distribution to the network connection in response to a user request for any desired number of the random bits." Claim 13 recites "transmitting any desired number of random bits requested by a user in the machine readable random bit stream over a network." Claim 14 recites "transmitting to the user over a network any desired number of random bits requested by the user." The Final Office Action (page 4) contended that the phrase "any desired number of random bits" renders claims 1, 8 and 12-14 indefinite because this element was allegedly "not actually disclosed . . . thereby rendering the scope of the claim(s) unascertainable." The Examiner further stated that "[i]t is not clear as to what range of information the claimed limitation is actually claiming." (Id.) In fact, Appellant's Specification amply discloses a user request for "any desired number of random bits" as recited in the claims.

For example, the Specification explains that

> If a web server is used, a remote user 114 communicates with the web server using a web client when random bits are desired. The user's request identifies the number of bits required and any special formatting requirements. To fulfill the user request, the download task reads the desired number of bits from the available disk files containing random bits.

(Specification, page 10, lines 8-12.) While Appellant is not certain what the Examiner means by "range of information," Appellant does respectfully submit that his claims particularly point out and distinctly claim the subject matter which he regards as the invention. As explained by the Specification, a user, e.g., via the world wide web, can request a number of random bits that the user desires, whereupon such number of random bits is transmitted over a network. Therefore, the scope of each of claims 1, 8, and 12-14 is both clear and supported by the Specification.

For at least the foregoing reasons, the rejection of claims 1-19 as allegedly unpatentable under 35 U.S.C. § 112, second paragraph, should be reversed.

B. Claims 1-19 Are Patentable Over The Alleged Combination of Hill and Wells (Ground of Rejection No. 2).

Hill is the primary reference cited for the prior art rejection of all pending claims. Hill discloses a digital payment system that uses digitally encoded random numbers in the form of tokens that a user may transfer to an on-line merchant and thereby spend. (Abstract.) Hill's random numbers are "generated . . . in blocks of 256K (=2,097,152 bits)" that are used to populate a random number database in which "each entry . . .contains a random sequence of 64 bit values." (Col. 10: 11-12, 25-27.) Entries in the random number database are used to construct tokens. (Col. 10: 10-11.) Tokens may then be reconstructed by knowing their size and the value of a start offset in a random number database. (Col. 9: 47-55.) Tokens received by the payment server may thereby be validated. (Col. 11: 19-45.) As explained below, the Applicant's independent claims are distinguishable from Hill's digital payment system in several important respects. Moreover, one of ordinary skill in the art would not and could not have combined Hill with Wells and Dolphin as alleged by the Examiner, providing further reason for the patentability of Appellant's claims.

1. Claims 1, 8, and 12-14: "any desired number of random bits"

Claim 1 recites "a download task executed by the processor for providing to a user any desired number of random bits requested by the user." Claim 8 recites "transmitting any desired number of random bits requested by a user over the network." Claim 12 recites "machine readable instructions . . . to format the random bit stream for distribution to the network connection in response to a user request for any desired number of the random bits." Claim 13 recites "transmitting any desired number of random bits requested by a user in the machine readable random bit stream over a network." Claim 14 recites "transmitting to the user over a network any desired number of random bits requested by the user."

Hill does not teach or suggest the foregoing limitations of claims 1, 8, and 12-14 at least because Hill is incapable of providing any desired number of random bits, much less doing so in response to a user request. In fact, Hill teaches at most providing certain predetermined numbers of random bits in the form of payment tokens. Hill's digital payment system receives random numbers in blocks of a size predetermined to be 256 kilobytes. (Col. 10: 25-27.) Thus, Hill is incapable of supplying "any desired number of random bits," because Hill can supply random bits only 256

kilobyte blocks. Therefore, Hill cannot supply any number of random bits desired by a user but can only supply a limited number of discrete quantities of random bits.

Moreover, Hill does not teach or suggest a user request for these blocks of random numbers; rather, Hill's random number database is populated by a computer program. (Col. 10: 14-24.) Thus, Hill does not receive user requests for random bits at all, much less for "any desired number of random bits."[1] In fact, Hill actually teaches away from receiving a user request for "any desired number of random bits" because Hill's system requires a predetermined number of random bits (2,097,152, to be precise) to be sent in a block of predetermined size to Hill's random number database.

At least because neither Hill nor any other prior art of record teaches or suggests the foregoing claim limitations, independent claims 1, 8, 12, 13, and 14 are in condition for allowance, as are claims 2-7, 9-11, and 15-19, depending respectively from claims 1, 8, and 14.

2. Improper Combination of Hill and Wells

The Final Office Action (page 5) acknowledged that "Hill is silent about the details of the circuitry used to generate the random bit stream such as [the] interface between the source and the processor and converting analog to digital signal." The Examiner further contended that "these details are not needed for one skilled in the art to know how the data is transferred from one module to the next and if the source is analog and the output is digital there must be a conversion from analog to digital." (Id.) However, the Examiner provided no support for this apparent attempt to assert that Hill inherently discloses, e.g., "an input interface coupled to the random source for receiving a random data stream from the random source and outputting the random bit stream" as recited in claim 1. Moreover, the Examiner explicitly acknowledged, as noted above, that Hill does not in fact teach or suggest the foregoing limitation of claim 1 or similar limitations of claims 8 and

[1] In the Advisory Action dated March 2, 2006, the Examiner stated that, during a January 24, 2006 telephone interview, the "examiner showed evidence that [a] user request for providing to a user a random number of bits is disclosed, which applicant's representative agreed as mentioned in the Examiner's Interview [Summary] dated 1/31/2006." Appellants strongly object to the Examiner's mischaracterization of both the January 24, 2006 telephone interview, and the January 31, 2006 Interview Summary. The January 31, 2006 Interview Summary states that the Examiner stated in the interview that "Hill discloses [user] requests for tokens comprising of random bits (e.g., one token comprising 64 bit random hexadecimal numbers." Appellants do not disagree that Hill discloses such tokens, nor do they disagree that the Examiner made such a statement during the January 24, 2006 interview. However, Appellants strongly disagree that Hill teaches or suggests supplying any desired number of random bits, much less doing so in response to a user request. The Examiner's attempt to suggest otherwise is incorrect and very improper.

12-14. Indeed, to compensate for the acknowledged deficiencies of Hill, the Examiner cited Wells' alleged teaching of an input interface coupled to a random number source. (Id. at 6.)

However, the Examiner provided no explanation for how one of ordinary skill in the art would have reasonably expected success in attempting to modify Hill with the alleged teachings of Wells. In fact, Hill and Wells are incapable of combination. Hill uses "a hardware random number generator" that "is a card which fits into a personal computer." (Col. 10: 25-29.) Thus, not only does Hill have no need for the input interface allegedly taught by Wells, but in fact such an input interface simply could not be added to the structure disclosed by Hill. For at least this reason, the proposed combination of Hill and Wells is improper, and the rejection of claims 1-19 should be reversed.

Further, there would have been no motivation for one of ordinary skill in the art to have combined Hill and Wells. The Examiner's stated motivation for combining Hill and Wells is no more than the alleged "benefit of the versatility and features taught by Wells." (Final Office Action, page 6.) This statement of motivation, or the alleged desirability of Wells' purported feature of combining "any number of integrated circuit devices for generating true random numbers" would not have suggested to one of ordinary skill to modify Hill as proposed by the Examiner, nor do these statements teach or suggest, for example, the input interface required by claim 1 or similar limitations of claims 8 and 12-14. In fact, Hill teaches away from an input interface such as is allegedly taught by Wells because Hill obtains random numbers from a card inserted in a personal computer that outputs a digital stream. (Col. 10: 27-37.) At a minimum, one of ordinary skill would have seen no need to modify Hill, for example, with an interface capable of converting analog noise to a digital stream because Hill's PC card produces a digital stream. For at least this reason, the proposed combination of Hill and Wells is improper, and the rejection of claims 1-19 should be reversed.

In sum, the rejection of claims 1-19 should be reversed for any of the foregoing independent reasons.

C. Claims 20-22 Are Patentable Over The Alleged Combination of Hill and Dolphin (Ground of Rejection No. 3).

Independent claim 20 requires in part:

> a first window for displaying information about a random bit stream awaiting distribution over a network;
> a second window for displaying diagnostic information regarding the random bit stream; and
> a window manager for controlling the layout of, and communication of data to, the first window and the second window while present for viewing on the display device.

Applicant respectfully submits that, contrary to the Examiner's assertion (Final Office Action, pages 9-10), none of the foregoing claim limitations are taught or suggested by either Hill or the alleged combination of Hill and Dolphin.[2]

1. "first window"

The portion of Hill cited by the Examiner as allegedly teaching "a first window for displaying information about a random bit stream awaiting distribution over a network" in fact teaches no more than a user "visit[ing] the QuickPay web site," to "set up an account" and thereby receive tokens. (Col. 8: 64 – 9: 30.) Further, Hill contains no teaching or suggestion that the user even knows that tokens containing random bits are received, much less does Hill teach or suggest "displaying information about a random bit stream awaiting distribution over a network." Accordingly, the "first window" recited in claim 20 is in no way taught or suggested by Hill, and the rejection of claims 20-22 should be reversed for at least this reason.

2. "second window

Further, the portion of Hill cited by the Examiner as allegedly teaching "a second window for displaying diagnostic information regarding the random bit stream" in fact teaches no more than a window that "gives a visual indication of the number of tokens remaining" on a client machine that a user may use for payment in subsequent transactions. (Col. 8: 27-28.) In other words, Hill's "visual indication" has absolutely nothing at all to do with a random bit stream. Accordingly, the "second window" recited in claim 20 is in no way taught or suggested by Hill, and the rejection of claims 20-22 should be reversed for at least this reason.

[2] In the Advisory Action dated March 2, 2006, the Examiner stated that, during the January 24, 2006 telephone interview, "applicant agreed with the Examiner that independent claim 20 does not claim features of the claimed invention and further agreed that claim 20 is not in condition for allowance." This statement is not true. Appellants again strongly object to the Examiner's improper mischaracterization of statement made during an interview. In fact, Appellants at all times reserved the right to make claims 20-22 the subject of an appeal to this Board.

3. "window manager"

The Examiner appears to have taken Official Notice that a "window menu is very well known in the art for interacting between several windows." (Final Office Action, pages 9-10.) Appellant presumes that the Examiner meant to refer to a "window manager" as is recited in claim 20. The Examiner also appears to be taking Official Notice for one of ordinary skill to have implemented a window manager for the first and second windows required by claim 20. (Id. at 10.) Accordingly, Appellant seasonably requested support for the taking of Official Notice, as provided by 37 CFR 1.104(d)(2) and MPEP § 2144.04. However, despite the Examiner's assertion that support for the taking of Official Notice has been provided (id. at 2), in fact, the Examiner has done no more than note that Hill and Dolphin disclose windows applications (id. at 3), and provide other references generally discussing the Windows® operating system, which does not teach or suggest the recited window manager. The rejection of claims 20-22 should be reversed for at least this further reason.

4. Improper Combination of Hill and Dolphin

The Examiner appears to have conceded that Hill in fact does not teach the limitations of claim 20, inasmuch as the Office Action dated June 28, 2006 (page 8) stated that "Hill does not provide drawings that illustrate the transaction interface to clearly implement the invention." In the Final Office Action, moreover, the Examiner conceded that Hill at most "suggests using [a] window for displaying information about [a] random stream." (Final Office Action, page 10.) The Examiner therefore contended that "Dolphin in an analogous art discloses . . . a window for displaying information about a random bit stream awaiting distribution over a network." (Id. at 10.) The Examiner further contends that Dolphin teaches the "second window" recited in claim 20. (Id.)

However, Dolphin nowhere mentions or even suggests random bits or a random bit stream. Indeed, Dolphin is directed to controlling access to data on "high density removable media." (Abstract.) Thus, Dolphin's Figures 4 and 8-10, cited by the Examiner (Office Action, at 8), illustrate no more than windows that include information concerning the transfer of such data, and contain no teaching or suggestion of windows containing information about a random bit stream or diagnostic information about the bit stream, as required by claim 20. Accordingly, the Examiner has failed to state a *prima facie* case for the combination of Hill and Dolphin at least because

Dolphin fails to teach the recited first window. Indeed, it is clear that the proposed combination of Hill and Dolphin cannot meet all, or in fact any, limitations of claim 20. The rejection of claims 20-22 should be reversed for at least this reason.

Moreover, the Final Office Action does not provide support in the prior art of record for any motivation to combine Hill and Dolphin. In fact, the Examiner has provided only a generic statement that one of ordinary skill would have modified Hill with Dolphin to allow "a user to interact using a user interface." (Final Office Action, page 10.) However, claim 20 clearly goes beyond the mere recitation of a "user interface." There is no motivation anywhere in the record for one of ordinary skill to have implemented any of the recited first window, second window, or window manager, and the rejection of claims 20-22 should be reversed for at least this reason.

Further, the Final Office Action does not provide any support for a reasonable expectation of success in attempting to combine Hill and Dolphin. In fact, one of ordinary skill could not have expected to combine Hill's online payment system using tokens based on random numbers with Dolphin's system for controlling access to high density removable media such as CD-ROMs. For at least this further reason, the rejection of claims 20-22 should be reversed.

In sum, for at least any of the foregoing reasons, independent claim 20, and also claims 21-22 depending therefrom, are in condition for allowance.

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CONCLUSION

In view of the foregoing arguments, Appellant respectfully submits that the pending claims are novel over the cited references. The Examiner's rejections of all pending claims are improper because the prior art of record does not teach or suggest each and every element of the claimed invention. In view of the above analysis, a reversal of the rejections of record is respectfully requested of this Honorable Board.

It is believed that any fees associated with the filing of this paper are identified in an accompanying transmittal. However, if any additional fees are required, they may be charged to Deposit Account 07-2347, under Order No. 99-466, from which the undersigned is authorized to draw. To the extent necessary, a petition for extension of time under 37 C.F.R. 1.136(a) is hereby made, the fee for which should be charged against the aforementioned account.

Respectfully submitted,

Dated: May 10, 2006 By _____

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CERTIFICATE OF MAILING/TRANSMISSION (37 CFR 1.8(a))

I hereby certify that this correspondence is, on the date shown below, being transmitted by facsimile to the United States Patent Office at 571-273-8300.

Dated: May 10, 2006 Signature: _____ (Christian R. Andersen)

VIII. CLAIMS APPENDIX

Pursuant to 37 CFR § 41.37(c)(vii), the following listing provides a copy of the claims involved in the appeal.

1. A system having a random source adaptable for distributing a random bit stream over a network, said system comprising:

an input interface coupled to the random source for receiving a random data stream from the random source and outputting the random bit stream;

a processor for receiving the random bit stream from the input interface and outputting the random bit stream in a machine readable form;

a plurality of disk files for saving random bits output from the processor;

a memory coupled to the processor for storing machine readable instructions used by the processor for formatting the random bit stream into a machine readable form;

a network connection coupled to the processor for making the random bit stream available to a network; and

a download task executed by the processor for providing to a user any desired number of random bits requested by the user.

2. The system according to claim 1, wherein the input interface includes an analog-to digital converter for converting the random source data into a digital signal.

3. The system according to claim 1, wherein the processor for receiving the random bit stream comprises:

a first processor; and

a second processor communicatively coupled to said first processor.

4. The system according to claim 3, wherein the first processor and second processor share said memory.

5. The system according to claim 1, wherein the network connection communicates with an Internet protocol network.

6. The system according to claim 1, wherein the network connection communicates with a wireless network.

7. The system according to claim 1, wherein the memory stores accounting information about the random bit stream.

8. A method for generating random bits as a function of a random source and distributing the random bits over a network, the method comprising the steps of:

collecting random data from a random source;

processing the random data to produce a random bit stream in a machine readable form;

saving the random bits in a plurality of disk files;

providing the random bits to a network connection; and

transmitting any desired number of the random bits requested by a user over the network.

9. The method of claim 8, further comprising the step of:
generating random data.

10. The method of claim 8, further comprising the step of:

receiving a random bit stream at a user location on the network.

11. The method of claim 8, further comprising the step of:
validating a user account prior to transmitting the random bits over the network.

12. A distributed system for the production and distribution of random bits, the distributed system comprising:

a first random number source generating a first random data stream;

a second random number source generating a second random data stream;

an interface to the first random number source for receiving the first random data stream and the second random data stream, the interface outputting a random bit stream;

a processor for receiving the random bit stream from the interface, and for formatting the random bit stream for distribution in a machine readable form;

a network connection coupled to the processor for making the machine readable random bit stream available to a network; and

a memory coupled to the processor for storing machine readable instructions used by the processor to format the random bit stream for distribution to the network connection in response to a user request for any desired number of the random bits.

13. A computer readable medium containing instructions for controlling at least one machine to perform a method for distributing random bits to a remote user, the method comprising the steps of:

converting a random data stream into a machine readable random bit stream;

saving the random bits to a plurality of disk files;

providing the machine readable random bit stream to a network connection; and

transmitting any desired number of random bits requested by a user in the machine readable random bit stream over a network.

14. A method for producing a random bit stream from a random source and offering the random bit stream to a remote user, the method comprising the steps of:

processing the random bit stream to form a distributable random bit stream;

making the distributable random bit stream available to a remote user from at least one of a plurality disk files; and

transmitting to the user over a network any desired number of random bits requested by the user.

15. The method of claim 14, further comprising the step of:

processing the random bit stream to ensure that successive bits are unbiased.

16. The method of claim 14, further comprising the step of:

performing accounting operations on the random bit stream to ensure that the remote user is billed for the received random bit stream.

17. The method of claim 14, further comprising the step of:

authorizing the remote user to receive the random bit stream prior to distributing the distributable random bit stream to the remote user.

18. The method of claim 14, further comprising the step of:

confirming that the remote user has received the distributable random bit stream.

19. The method of claim 14, further comprising the step of:

encapsulating the random bit stream.

20. A system for making random numbers available to a remote user in digital form, the system comprising:

a computer;

a display device communicatively coupled to the computer, the display device comprising:

a first window for displaying information about a random bit stream awaiting distribution over a network;

a second window for displaying diagnostic information regarding the random bit stream; and

a window manager for controlling the layout of, and communication of data to, the first window and the second window while present for viewing on the display device.

21. The system of claim 20 further comprising:

a third window, displayable on the display device, for communicating information to a remote computer.

22. The system of claim 20 further comprising.
an input device.

IX. EVIDENCE APPENDIX

(Not applicable.)

X. RELATED PROCEEDINGS APPENDIX

(Not applicable.)